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AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions:

1. (Currently Amended) A method comprising:

receiving an input voltage for a digital power rail of a display;

regulating the input voltage to a start-up voltage during a start-up period, said start-up period comprising a predetermined length of time; and

regulating the input voltage to a steady-state voltage after the start-up period, said steady-state voltage being lower than the start-up voltage.

2. (Original) The method of claim 1 wherein the digital power rail of the display powers at least one of a data driver and a panel controller.

3. (Original) The method of claim 1 wherein the start-up voltage is substantially equal to the input voltage.

4. (Original) The method of claim 1 wherein regulating the input voltage to the start-up voltage comprises:

passing the input voltage during the start-up period.

5. (Original) The method of claim 1 wherein regulating the input voltage to the steady-state voltage comprises:

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linearly biasing the input voltage down to the steady-state voltage after a capacitance-induced delay of at least the start-up time.

6. (Original) The method of claim 1 wherein regulating the input voltage to the steady-state voltage comprises:

pulse width modulating the input voltage down to the steady-state voltage.

7. (Currently Amended) An apparatus comprising:

a digital input power rail to receive an input voltage for a display; and

a voltage regulator to regulate the input voltage to a start-up voltage during a start-up period, said start-up period comprising a predetermined length of time, and to regulate the input voltage to a steady-state voltage after the start-up period, said steady-state voltage being lower than the start-up voltage.

8. (Original) The apparatus of claim 7 wherein the voltage regulator comprises a pulse width modulator.

9. (Original) The apparatus of claim 8 wherein, to regulate the input voltage to the start-up voltage, the pulse width modulator switches the input voltage at a first duty ratio, and, to regulate the input voltage to the steady-state voltage, the pulse width modulator switches the input voltage at a second duty ratio.

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10. (Currently Amended) An apparatus comprising:

a digital input power rail to receive an input voltage for a display; and

a voltage regulator to regulate the input voltage to a start-up voltage during a start-up period, and to regulate the input voltage to a steady-state voltage after the start-up period, said steady-state voltage being lower than the start-up voltage,

wherein the voltage regulator comprises a pulse width modulator,

wherein, to regulate the input voltage to the start-up voltage, the pulse width modulator switches the input voltage at a first duty ratio, and, to regulate the input voltage to the steady-state voltage, the pulse width modulator switches the input voltage at a second duty ratio, and

~~The apparatus of claim 9~~ wherein the first duty ratio is 1.

11. (Currently Amended) An apparatus comprising:

a digital input power rail to receive an input voltage for a display; and

a voltage regulator to regulate the input voltage to a start-up voltage during a start-up period, and to regulate the input voltage to a steady-state voltage after the start-up period, said steady-state voltage being lower than the start-up voltage,

wherein the voltage regulator comprises a pulse width modulator,

wherein, to regulate the input voltage to the start-up voltage, the pulse width modulator switches the input voltage at a first duty ratio, and, to regulate

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the input voltage to the steady-state voltage, the pulse width modulator switches the input voltage at a second duty ratio, and

~~The apparatus of claim 9~~ wherein the second duty ratio is 2.5/3.3.

12. (Original) The apparatus of claim 7 wherein the voltage regulator comprises a linear voltage regulator.

13. (Currently Amended) An apparatus comprising:

a digital input power rail to receive an input voltage for a display; and

a voltage regulator to regulate the input voltage to a start-up voltage during a start-up period, and to regulate the input voltage to a steady-state voltage after the start-up period, said steady-state voltage being lower than the start-up voltage,

wherein the voltage regulator comprises a linear voltage regulator, and

~~The apparatus of claim 12~~ wherein the linear voltage regulator comprises:

a regulating component coupled between a first node and a second node, said first node comprising the digital input power rail, said second node comprising an output power rail;

a first resistive element coupled between the first node and a third node;

a bandgap reference element coupled between a ground node and the third node;

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an operational amplifier having an inverting input coupled to the third node, a non-inverting input coupled to a fourth node, and an output coupled to a fifth node;

a second resistive element coupled between the fourth node and the ground node;

a third resistive element coupled between the second node and the fourth node;

a first capacitive element coupled between the fourth node and the ground node; and

a second capacitive element coupled between the second node and the ground node.

14. (Original) The apparatus of claim 13 wherein the regulating component comprises a pass-element transistor.

15. (Original) The apparatus of claim 14 wherein the pass-element transistor comprises a p-channel metal oxide semiconductor field effect transistor (MOSFET).

16. (Original) The apparatus of claim 13 wherein the regulating component is to provide isolation between the first and second nodes.

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17. (Original) The apparatus of claim 13 wherein the bandgap reference element comprises a Zener diode.

18. (Original) The apparatus of claim 13 wherein the input voltage is 3.3 volts, the steady-state voltage is 2.5 volts, and the bandgap reference element provides a reference voltage of 1.225 volts.

19. (Original) The apparatus of claim 13 wherein the first capacitive element provides the start-up period.

20. (Currently Amended) A machine readable medium having stored thereon machine executable instructions, the execution of which implement a method comprising:

receiving an input voltage for a digital power rail of a display;

regulating the input voltage to a start-up voltage during a start-up period, said start-up period comprising a predetermined length of time; and

regulating the input voltage to a steady-state voltage after the start-up period, said steady-state voltage being lower than the start-up voltage.

21 (Original) The machine readable medium of claim 20 wherein regulating the input voltage to the start-up voltage comprises:

passing the input voltage during the start-up period.

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22. (Original) The machine readable medium of claim 20 wherein regulating the input voltage to the steady-state voltage comprises:

linearly biasing the input voltage down to the steady-state voltage after a capacitance-induced delay of at least the start-up time.

23. (Original) The machine readable medium of claim 20 wherein regulating the input voltage to the steady-state voltage comprises:

pulse width modulating the input voltage down to the steady-state voltage.

24. (Currently Amended) A system comprising:

a liquid crystal display (LCD); and

a power supply coupled to the LCD, said power supply comprising:

a digital input power rail to receive an input voltage for the LCD; and

a voltage regulator to regulate the input voltage to a start-up voltage during a start-up period, said start-up period comprising a predetermined length of time, and to regulate the input voltage to a steady-state voltage after the start-up period, said steady-state voltage being lower than the start-up voltage.

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25. (Original) The system of claim 24 wherein the voltage regulator comprises a pulse width modulator.

26. (Original) The system of claim 25 wherein, to regulate the input voltage to the start-up voltage, the pulse width modulator switches the input voltage at a first duty ratio, and, to regulate the input voltage to the steady-state voltage, the pulse width modulator switches the input voltage at a second duty ratio.

27. (Original) The system of claim 24 wherein the voltage regulator comprises a linear voltage regulator.

28. (Currently Amended) A system comprising:

a liquid crystal display (LCD); and

a power supply coupled to the LCD, said power supply comprising:

a digital input power rail to receive an input voltage for the LCD; and

a voltage regulator to regulate the input voltage to a start-up voltage during a start-up period, and to regulate the input voltage to a steady-state voltage after the start-up period, said steady-state voltage being lower than the start-up voltage,

wherein the voltage regulator comprises a linear voltage regulator, and

~~The system of claim 27~~ wherein the linear voltage regulator comprises:

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a regulating component coupled between a first node and a second node, said first node comprising the digital input power rail, said second node comprising an output power rail;

a first resistive element coupled between the first node and a third node;

a bandgap reference element coupled between a ground node and the third node;

an operational amplifier having an inverting input coupled to the third node, a non-inverting input coupled to a fourth node, and an output coupled to a fifth node;

a second resistive element coupled between the fourth node and the ground node;

a third resistive element coupled between the second node and the fourth node;

a first capacitive element coupled between the fourth node and the ground node; and

a second capacitive element coupled between the second node and the ground node.

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